

APPENDIX AB

OPERATIONAL CONSIDERATIONS

The considerations which follow will be used in the determination of the buffer area between the hydraulic line and the final boundary of the restricted area marking hazardous waters adjacent to Civil Works structures:

1. What type of user is in and around the area (anticipated and existing)?
2. What types of accidents, near accidents, or incidents have occurred?
3. Should any type of environmental condition be considered such as air temperature, water temperature, winds etc.?
4. What are the consequences of a small vessel or person entering this area?
5. Are the currents such that a small vessel or person is likely to be drawn into the hazardous area?
6. Is the restricted area marked far enough upstream and downstream to reduce the hazard should a small vessel lose power?
7. Are navigation channels placed so that the traffic is directed away from the structure's hazardous area?
8. Is the structure well marked and visible from beyond the restricted area?
9. Does the change in seasons have significant effects on intake or discharge requirements (power, flooding, etc.)?
10. Can a buoy system be installed which will act as a continuous barrier and provide a well defined restricted area?
11. Is such a barrier practical? (Consider seasonal changes, size of structure, costs, and consequences of having or not having such a barrier.)
12. Can a buoy system be installed which will act as a line of sight (not continuous) and will provide a well defined restricted area?
13. Is there a need for a barrier to keep vessels from entering the restricted area?
14. Are signs on the structure large enough, and placed in such a manner as to be read from outside the restricted area or from a distance that will allow for evasive action?
15. Should signs and buoys be lighted?
16. Are buoys in accordance with the uniform state waterway system?

17. Do signs comply with EP 310-1-6a&b, Sign Standards Manual?
18. Is the area noted on navigation charts?
19. Are obstructions marked appropriately?
20. If a vessel or person becomes trapped against the structure, is there a means of egress in the vicinity?
21. What is the shoreline like? Would this help or hinder rescue operations?
22. Are signs, buoys, and the structure visible outside the restricted area at night?
23. Does a hazardous condition exist or occur which the visiting public may not recognize?
24. Is there a need to indicate water is passing through the structure?
25. Are warning devices present which indicate the status of all facets of the structure? Is there a need for this type of system?
26. Is any portion of the structure remote controlled? If so, are adequate safety devices in place that ensure the public is warned prior to changes in flow (increases or decreases)?
27. Are all hazardous areas visually surveyed prior to making any type of change in flow requirements?
28. Should a buoy line be installed so as to be supportive of other agencies' rules and regulations?
29. Can the discharge be modified to reduce the area of hazardous waters downstream?